

Appl. No.: 10/618,223
Amdt. dated 05/17/2005
Reply to Office action of February 17, 2005

REMARKS/ARGUMENTS

The amendments above and the remarks below are in response to an Office Action mailed on February 17, 2005. In the Office Action, the drawings were objected to for having reference numerals not described in the specification. Also, the specification was objected to in selected areas. Further, all of the pending Claims 1-24 and 37-42 were rejected under 35 U.S.C. §§112, 102 and 103.

OBJECTIONS

The drawings were objected to for a lack of citation in the specification of reference numbers 410 (Figure 10), 400 (Figure 18) and 120 (Figures 27 and 28). Reference number 410 refers to the divergent motion of the legs when deployed. The reference number 410 has been added on page 9, line 13 of the specification. Reference number 400 refers to a coupler at the end of the legs forming the "whisk" style measurement device. Reference number 400 is now used in the description on amended page 10, line 18 of the specification. Reference number 120 refers to an end of the bronchoscope 110. Reference number 120 is now used in the description on amended page 13, line 2 of the specification. The objections to the drawings have therefore been overcome.

As shown above, several amendments were made to the specification to correct the objections thereto in the Office Action. The objections to the specification have therefore been overcome.

Claim 15 was objected to for reciting a measurement mechanism. This has been amended to recite a measurement assembly. The objection to Claim 15 has therefore been overcome.

Claim 17 was objected to for failing to limit its parent independent Claim 7. Claim 17 has been amended to recite that the optical scope is used to view placement of the measurement assembly. The objection to Claim 17 has therefore been overcome.

Claim 20 has been amended to recite measurement "assembly" as specified by the Examiner. The objection to Claim 20 has therefore been overcome.

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REJECTIONS

35 U.S.C. §112

Claims 3-6, 10-13 and 39-42 were rejected under 35 U.S.C. §112 for being indefinite. Claims 3, 10 and 39 were rejected for a lack of antecedent basis for "the first conduit." Claims 6, 13 and 41 were rejected for a lack of antecedent basis for "the first and second handle locations." Claims 5, 12 and 41 were rejected for an allegedly unclear use of "thereof."

The phrase "the first conduit" has been amended to recite "the exterior conduit" to provide antecedent basis. The remaining recitations have been amended to use an indefinite article to provide antecedent basis. Also, "thereof" has been replaced with "of the legs" to clarify that "thereof" is referring to the legs. As a result, each of the rejections under 35 U.S.C. §112 has been overcome.

35 U.S.C. §102(e),(b)

Claims 1-3, 6-10, 13, 37-39 and 42 were rejected under 35 U.S.C. §102(e) over U.S. Patent No. 6,427,351 to Matthews et al. ("Matthews"). Claims 1-4, 6-11, 13-23, 37-39 and 42 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 5,010,892 to Colvin et al. ("Colvin"). Claims 1, 5-7, 12-14, 16-23, 37, 41 and 42 were rejected under 35 U.S.C. §102(e) over U.S. Patent No. 6,450,976 to Korotko, et al. ("Korotko").

Claim 1 of the above-listed application recites an exterior conduit, an interior conduit, a measurement assembly and a handle. The measurement assembly includes at least two legs coupled proximal the distal end and coupled about the distal end of the interior conduit. The handle is configured to open and close the measurement assembly. The inward facing surfaces of the distal ends of the legs are configured to lie substantially flush when the measurement assembly is closed by the handle. Advantageously, this ability of the legs to lie substantially flush at their distal ends allows the distal end of the legs to pass through a narrowed portion of a lumen, such as past a blockage, to measure the lumen on the other side of the narrowed portion.

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Matthews

Matthews discloses a measuring device 10 having a handle 36 with an extension 23 fixed to and extending from the handle, as shown in Figure 1. The extension includes a pair of adjacent tubes 20, 22. Wires 40, 42 extend distally through the tubes to emerge from a tip 16 attached to the adjacent tubes. The tip has a flared end, as shown in Figures 2 and 3 of Matthews. A button 30 is slidable along the handle and is attached to the wires wherein advancement of the button moves the wires distally to diverge out of the flared end of the tip. The more the button is pushed distally, the greater the distance between ends of the wires 40, 42, allowing lumen measurement.

Although the wires 40, 42 of Matthews deploy to measure a lumen, they must extend through the flared end of the tip 16. Even when retracted, the flared end of the tip 16 does not appear from the figures of Matthews to constrain the wires to lie substantially flush against each other. Matthews, therefore, fails to teach or suggest Claim 1 of the present application.

Colvin

Colvin discloses a measuring instrument 10 having a sleeve 12, a handle 14 and a flexible cable 16 positioned within the sleeve, as shown in Figures 1 and 2. At a distal end of the flexible cable is a bifurcated probe having a memory for an outwardly curved shape when extended from the sleeve. A scale 24 is correlated to the deployment of the probe and provides a diameter measurement of a lumen. Ends of the bifurcated portions of the flexible cable each include a rounded ball.

Colvin discloses the flexible cable that bifurcates to allow measurement of the lumen. However, the rounded ball at the end of each of the bifurcated portions of the cable prevent the portions from lying substantially flush against each other. Colvin, therefore, fails to teach or suggest Claim 1 of the present application.

Korotko

Korotko discloses a device for measuring the inside diameter of a vessel, as shown in Figure 10. Included in the device are a tube 132, measuring wires 130 and a knob 136. The

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wires extend within lumens of the tube and extend out of slots 140 cut into the distal end of the tube with the turning of the knob, as shown in Figure 11 of Korotko. The turning of the knob is correlated with a diameter of the bulging wires, allowing it to measure the diameter of the vessel.

Nothing in Korotko appears to teach or suggest that the measuring wires 130 will lie substantially flush against each other when retracted into the tube. In Figure 7, Korotko does disclose a length measuring apparatus 100 that includes an inner barrel 110 and an outer barrel 112 that are flush to each other. However, this is only a length measuring apparatus with concentric barrels and not a diameter measuring apparatus with legs that diverge. Korotko, therefore, fails to teach or suggest the Claim 1 of the present application.

35 U.S.C. §103(a)

Claims 24 and 40 were rejected under 35 U.S.C. §103(a) over Colvin in combination with U.S. Patent No. 5,919,147 to Jain ("Jain").

Jain

Jain discloses a vascular measuring device 10 including a sheath 22, a catheter 24 and a sensor 26, as shown in Figures 1-4. A proximal end 38 of the catheter includes graduated markings 42, while the distal end 40 supports the sensor 26. The sensor 26 includes several radially outwardly-biased filaments 44. When the catheter is retained within the sheath, the filaments of the sensor are within the sheath. When deployed from the sheath, the filaments of the sensor fan outward. Notably, even when retained, the filaments of the sensor still have a spread-apart fan-like configuration, as shown in Figure 2.

In another embodiment, Jain discloses a different sensor 54, as shown in Figures 5 and 6. The sensor 54 includes a pair of outwardly-biased arcuate arm springs 56 and 58. These springs are in a "longitudinally flat position" when in a retracted position within the sheath 22. However, as shown in Figure 5 even the ostensibly flat position still has a significant gap between the arm springs 56 and 58. Neither of these embodiments discloses the arm springs or filaments being in a substantially flush position when not deployed. Therefore, Jain fails to teach

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or suggest Claim 1 of the present application, and does not overcome Colvin's above-described failure to teach or suggest Claim 1.

No other combination of the Mathews, Colvin, Korotko, Jain or the remaining cited references teaches or suggests a measurement assembly having legs with distal ends having inward facing surfaces configured to be substantially flush in a closed position as recited Claim 1. Independent Claims 7, 24 and 37 have also been amended to recite a measurement assembly having legs with distal ends having inward facing surfaces configured to be substantially flush. The remaining pending Claims 2-6, 8-23 and 38-42 each depends from and further patentably distinguishes one of the dependent claims. Therefore, the rejections of Claims 1-24 and 37-42 under 35 U.S.C. §§102 and 103 have been overcome.

In view of the remarks and amendments presented above, it is respectfully submitted that Claims 1-24 and 37-42 of the present application are in condition for allowance. It is respectfully requested that a Notice of Allowance be issued in due course. The Examiner is requested to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 50-2764.

Respectfully submitted,

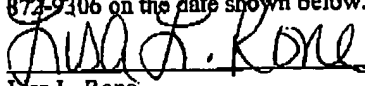

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5/17/05

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